

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 78.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-030073**Date Inspected:** 26-Sep-2013**Project Name:** SAS Superstructure**OSM Arrival Time:** 1500**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2330**Contractor:** Steward Machine Co.**Location:** Birmingham, AL**CWI Name:** Fred Hudson**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** E2 Shear Key Anchorages**Summary of Items Observed:**

Quality Assurance Inspector (QAI) Andrew Webster was present on the date and times noted above in order to observe the fabrication and Quality Control (QC) functions performed by Steward Machine Company for the E2 Shear Key Anchorages for the SFOBB project. The following items were observed:

Steward Machine - Plant 1:

This QAI performed a walkthrough at the shop to verify plates on site and to observe Steward Machine personnel at work machining and welding. Work performed at the Steward Machine shop as noted below:

CNC Machine #230 milling assembly S3C. (Machining to size)

CNC Machine #231 milling assembly S3B. (Machining west end)

The following plates were noted staged throughout the shop in various stages of processing.

Bay 4 – Plates:

S3C-e3. Formed, stressed relieved, partially machined and stud welded.

S4C-e4. Formed, stressed relieved, partially machined and stud welded.

Pallet of r3, m3, k3, j3 and p3 plates.

S3B assembly:

This QAI noted the above mentioned assembly having the root passes welded on the straps. The welding was done by qualified welder Jeffery Hennington (476). The welding was done to the approved welding procedure (WPS) P2-W126-B and P2-W128-B. All welding done was monitored by Certified Welding Inspector (CWI) Fred

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Hudson. The welding was being done on side B. After the root passes were welded this QAI witnessed the QC Inspector MPT the root pass. After the QC Inspector was done with his MPT inspection this QAI performed the required MPT verification on the root pass. After the MPT was found to be acceptable the welder continued to weld the straps on side B. The QC Inspector and this QAI also performed final MPT on the east end of this assembly and it was found to be acceptable.

After all welding was completed this QAI noted that the assembly was removed from the stand it was welded to and placed on machine #231 for final machining.

S4B assembly:

This QAI noted the above mentioned assembly had the s3 rod removed from the j3 plate as it was installed incorrectly. The area was ground and the QC Inspector performed MPT on the area. A new s3 rod was fit and welded by qualified welder Jeffery Hennington (476). The welding was done to the approved welding procedure (WPS) P2-W101-B. All welding done was monitored by Certified Welding Inspector (CWI) Fred Hudson. After the welding was done the welds were MPT by the QC Inspector.

This assembly was then taken to the paint area where it was cleaned, blasted and painted for shipping. The blast profile was taken in eight locations all of the profiles were within the requirement of the contract 1.57 to 3.38 mills.

S4C assembly:

This QAI noted the above mentioned assembly had the sikadur poured in. no other work will be done with this part this evening to allow the sikadur to set.

NON-DESTRUCTIVE TESTING (NDT).

The QA performed NDT on the following.

Assembly S3B (Final East End) at Steward Plant 1:

- Visual Testing (VT) & Magnetic Particle Testing (MPT) Accept. (See TL-6028 for detailed information.)

Assembly S3B straps (Root pass side B (x8)) at Steward Plant 1:

- Visual Testing (VT) & Magnetic Particle Testing (MPT) Accept. (See TL-6028 for detailed information.)

The Non Destructive Testing (NDT) listed above were observed performed and accepted by the QC Inspectors prior to the QA Inspector performing the tests. The QC Inspectors performed 100% NDT with the QA Inspector performing over 10% NDT.

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Summary of Conversations:

Only general conversations with Steward Machine QC NDT personnel relevant to work and testing performed during this shift.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Gary Thomas 916-764-6027, who represents the Office of Structural Materials for your project.

Inspected By: Webster, Andrew

Quality Assurance Inspector

Reviewed By: Foerder, Mike

QA Reviewer